

# Flightfax<sup>®</sup>



Online Report of Army Aircraft Mishaps

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*Discipline is the soul of an army. It makes small numbers formidable; procures success to the weak, and esteem to all.*  
– George Washington

Consider these summaries of findings from mishaps in the last 60 days –

- The crew failed to coordinate their actions.
- The crew failed to announce and communicate the decision to delay extension of the landing gear.
- The crew failed to communicate positively...in contravention of the ATM.
- The pilots failed to announce their actions, an error in crew coordination.
- One crewmember was unrestrained during the accident sequence.

Bottom line, across our Class A mishaps, we continue to see issues of overconfidence and complacency, inadequate mission planning, aircrew coordination errors and a general assumption of low risk during mission planning and execution. In human factors language, we are seeing acts of omission – specifically, omission involving indiscipline and lack of adherence to standards.

CW4 Saville points out in his DES article, “Aircrew Discipline,” that indiscipline may manifest itself in many ways during aviation operations. Selecting which rules to obey and which ones to ignore, as well as judgment lapses places the aircraft, crew, and others in needless danger. The problem with minor indiscipline infractions when the mission has not been compromised, is that we are lulled by the perceived success and/or survival, and then let our guard down and accept even more risk from these behaviors.

Human errors are nothing new to us in Army Aviation. In providing background and, more importantly, suggestions on how to mitigate this risk with unwavering discipline, we’ve included two Blast from the Past articles. The first titled, “Let Me Do It...You Hold Your Diet Coke,” from September 2005, is an accident investigation that spotlights the ways in which aircrews become lulled into not recognizing the increased risk due to indiscipline. In the second article, “Accountability,” from March 1999, BG Charles M. Burke, reiterates to Commanders that “we must curb indiscipline by creating a climate of accountability in which violations of regulations and procedures are not tolerated. And we must do it before an accident happens.”

Leaders carry a tremendous responsibility, for our profession tolerates no margin for error. Discipline, communication and training are the keys to safe aviation operations.

Until next month, fly safe!

LTC Christopher Prather, USACR/SC Aviation Director

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# Blast From The Past

Articles from the archives of past Flightfax issues

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## ***“Let Me Do It...You Hold Your Diet Coke”*** reprinted from September 2005 Flightfax

Discipline is the most important attribute of an Army Aviator or crewmember. Learned discipline allows inexperienced aviators and crewmembers to overcome a deteriorating tactical situation or unexpected weather conditions. Unwavering discipline keeps a mid-level aviator from attempting maneuvers beyond his capabilities and from placing his crew in situations of unnecessary risk. Discipline enhanced by experience allows senior aviators and crew chiefs to make solid recommendations to air mission commanders and influence the actions of fellow crewmembers.

Indiscipline can result in anything from a paper cut, to brain damage, to death. That is what’s so disturbing about the whole indiscipline thing – you never know what the results might be. As an aircrew, you might be able to find that “sucker hole” and get your aircraft with eight passengers onboard below the clouds, OR you might hit a 1,000-foot television broadcast tower! You might do that break turn and get a great photograph you can e-mail home, OR you might impact a rocky hillside and suffer brain damage so severe that you won’t be able to recognize any of your family members.

Discipline is not isolated to the cockpit, but it can end in the cockpit. Just as several layers of carbon fiber make armor plating strong, multilayered discipline – including your air mission commander, troop or company commander, and squadron or battalion commander – is essential. However, no matter how robust the discipline in these top layers, a discipline breach in the cockpit can be catastrophic.

A recent accident illustrates the result of cockpit indiscipline. In this accident, the crew was providing security during a supply ring flight. A risk assessment worksheet (RAW) was completed for the mission, with the mission complexity portion of the RAW indicating COMBAT. During the flight, a request was made from one of the aircraft in the flight to perform a maneuver with a steep bank angle which would expose the underside of the aircraft. The crew agreed to this photographic opportunity and had a short discussion on who would be on the flight controls during the maneuver. The discussion ended with, “Let me do it, you hold your Diet Coke.”

The crew performed a breaking turn with a bank angle in excess of 60 degrees. Consequently, the crew failed to anticipate and recover from the high sink rate from the aggressive maneuver and the aircraft impacted the ground and was destroyed. Thankfully, the crew suffered only minor injuries.

As stated earlier, the RAW indicated COMBAT, but this was not meant to allow the crew to do whatever they wanted. The crew was briefed to perform maneuvers or mission deviations only in response to tactical situations.

When the accident occurred, they were not maneuvering away from surface-to-air fires, there was no call for immediate assistance by ground troops, nor were there any troops-in-contact. The crew’s indiscipline resulted in the total loss of a helicopter. The enemy never lifted a finger. This lack of discipline directly impacted the combat readiness of this unit.

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# Blast From The Past

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## The facts

Many of you may be unaccustomed to this level of exposure. To further emphasize the situation, we offer the following –

- Between 1 October 2002 and 29 June 2005, 88 Army aircraft have been lost to accidents. Replacement costs for these aircraft will exceed \$1 billion.
- In fiscal year 2005, 34 Soldiers lost their lives to aviation accidents; that's 14 percent of all Army Soldier accidental fatalities.

Any feelings these statistics and this article might give you pale in comparison to a visit to one of our regional medical centers or civilian hospitals treating survivors of these accidents. Our national industrial base can manufacture or rebuild helicopters, but no factory can restore brain function or full mobility to a Soldier injured in an accident.

## Conclusion

With the recent sharp rise in Army Aviation accident rates, increased emphasis has been placed on determining what root causes precipitated the accidents. Are you a potential root cause? Does your current level of discipline rule out inappropriate behavior in the face of command pressure or peer pressure? What about loss of "cool points?" If YOU have been trained, signed-off, and knowingly induce a maneuver while flying an aircraft, then YOU are required to anticipate, adjust, and recover from any flight conditions that may transpire.

If you are unsure of your abilities given the environmental conditions (wind, density altitude or temperature), the performance limitations of your aircraft, or your personal limitations, don't do an extreme maneuver until the conditions are more favorable. If you are not briefed to do a certain type of maneuver or mission, don't do the maneuver or mission until you are properly authorized and have applied all applicable mitigation measures. Extreme tactical situations may require real-time mission modification, but these situations should be taken into consideration during contingency planning. Most importantly, if you know you can successfully execute the maneuver and have been briefed, BUT the maneuver is not appropriate – **DON'T DO IT!**

Discipline begins and ends with you, the Army Aviation Soldier. Unwavering discipline will result in increased professionalism between your aircrew members and will reduce the probability of accidents within your unit.

**"Nothing can be more hurtful to the service than the neglect of discipline; for that discipline, more than numbers, gives one Army superiority over another."**

--GEN George Washington



# Aircrew Discipline

**Chief Warrant Officer 4 Todd Saville**  
**Directorate of Evaluation and Standardization**  
**U.S. Army Aviation Center of Excellence**  
**Fort Rucker, AL**

**Standards — everything we do in the Army involves standards. Any endeavor that is inherently dangerous requires adhering to an established set of norms to mitigate risks. The environments that we operate in as Army aviators demand that we follow procedures and regulations and, in their absence, exercise good judgment.**

During the past 10 years, the Army has been successful in developing exceptionally battle-focused individuals with skill sets unimaginable in previous decades. We now have aviators with 4 or 5 years' experience and between 1,500 and 2,000 hours' combat time in demanding environments of high-density altitude, high gross weight and rugged terrain. Operating under these conditions has matured our aviator's experience levels at a rate not seen since the Vietnam War. However, the benefits have not come without some costs. Combat tends to breed a culture of focusing on the objective while treating everything else as relatively unimportant. Aviation standards apply to all aviation operations, whether downrange on a combat mission or on the "back 40" at home station. Regulations have been developed to provide the aircrew with boundaries that ensure the highest probability of success, coupled with safe mission accomplishment. Regulations cannot and should not address every possible scenario an aviator will face — this is where judgment must dictate appropriate actions. The pressures to complete the mission can create tough situations and challenge aircrews, but as professionals, we must always strive to do the job correctly and safely. Leaders (formal and informal) must be alert to acts of indiscipline within their formations as these are indicators of poor or flawed judgment that can lead to accidents.

Indiscipline may manifest itself in many ways during aviation operations. Selecting which rules to obey and which ones to ignore, as well as judgment lapses places the aircraft, crew, and others in needless danger. Leaders must address these willful violations of known standards immediately. Crew coordination errors, failure to maintain airspace surveillance and being unaware of the aircraft's performance limits reflect a dangerous breakdown in situational awareness. When aircrews demonstrate indiscipline by violating regulations and procedures, exceeding the capabilities of their aircraft (i.e., the laws of physics and aerodynamics), or exceeding their own capabilities, the results can be disastrous. Discipline is not only something to be administered; it's something to be practiced. By conducting effective training, following regulations and standards, and making prudent decisions in each situation, we increase our effectiveness and reduce accidents. Safety begins with standardization.



# Broken Wing Awards

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The Army Aviation Broken Wing Award recognizes aircrew members who demonstrate a high degree of professional skill while recovering an aircraft from an in-flight failure or malfunction, requiring an emergency landing. Requirements for the award are in DA PAM 385-10, Para 6-3f. The following have been approved for the Broken Wing Award:

**1LT John A. Bailey**

**1LT Hector M. Echevarria**

**1<sup>st</sup> Battalion, 214<sup>th</sup> Aviation Regiment**

On 6 April 2010, 1LT Bailey and 1LT Echevarria demonstrated extraordinary judgment and skill when the engine housing and propeller system on the left engine of a C-12U separated from the aircraft. While descending from 15,000 ft. to 5,000 ft. in instrument meteorological conditions (IMC) the crew heard a loud bang which emanated from the left side of the aircraft. During the initial phase of this emergency the aircraft pitched up, yawed to the left, and decelerated approximately 50 knots within the first few seconds. With the damage incurred to the critical left engine, the sudden Center of Gravity shift of approximately 350 pounds and extreme left yawing tendencies of the C-12, the immediate actions of the crew prevented any further loss of airspeed and losing control of the aircraft. A single-engine landing was accomplished without further incidence. 1LT Bailey's and 1LT Echevarria's composure under pressure, appropriate response to the emergency, and superior airmanship prevented what could have been a catastrophic accident and loss of life.

**CW3 Anthony DeJiacomo**

**1-14<sup>th</sup> Aviation Regiment, Fort Rucker, Alabama**

On 6 May 2010, while on the controls of the OH-58D and demonstrating a simulated engine failure with 180 degree turn, CW3 DeJiacomo felt a thump in the controls and experienced a complete loss of hydraulic power while in a 45 degree left bank at approximately 800 ft and 80 knots. CW3 DeJiacomo immediately began to recover the aircraft from the bank while directing his student to begin the emergency procedure for a hydraulics failure. He simultaneously corrected for the left bank, leveled the aircraft, increased the throttle to 100%, and adjusted the collective to continue controlled flight. He quickly realized he could not safely land at his initial intended landing area for lane one. CW3 DeJiacomo then visually cleared the airspace, contacted tower, announced his intentions on the air-to-air frequency and was granted an emergency clearance to lane four. Through exceptional airmanship, CW3 DeJiacomo instinctively applied the proper control inputs to land at the most suitable, safe landing area, touching down at 25 knots. His quick thinking and skill averted an airborne rollover and prevented the complete loss of aircraft and life.

# Mishap Review: EO-5C PIC Evaluation

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While conducting a pilot In command (PIC) evaluation, the crew failed to ensure their landing gear was lowered prior to descending below 500 ft AGL during a simulated two engine inoperative emergency procedure. Consequently, the aircraft touched down gear-up on the runway, causing significant damage to the aircraft.



## History of flight

The accident aircraft was scheduled to conduct a day pilot in command (PIC) evaluation. The flight was scheduled for approximately 3.5 hours. The crew completed aircraft preparation, crew briefs, checked weather, preflight and filed the flight plan. Weather was VMC with clear skies and unrestricted visibility just as the crew was briefed.

Following run-up, the aircraft departed on the first leg of their composite flight plan at 1209 local. Following several turns in holding, at two different airfields, the crew completed a full stop landing followed by a departure back to their home station. Upon arrival at their home station, the crew completed their second full stop landing where they then conducted a seat swap. Remaining in closed traffic, the crew then departed, and began their emergency procedure training portion of the evaluation.

After completing a single engine inoperative emergency procedure followed by a three engine go-around. The IP failed the second engine and the PI receiving the PIC evaluation began the steps for a two engine inoperative emergency procedure. After reading, but not completing all of the steps of the emergency procedure, the crew received clearance to land from tower. The crew turned final and touched down on the runway at 1519 local without extending their landing gear. The aircraft received significant underside damage with no injuries to the crew.

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### **Crewmember experience**

The IP, sitting in the left seat, was the battalion SP. He had more than 6,700 hours total flight time, 2,600 fixed-wing hours, of which 240 was in the EO-5C. The IP was on his first assignment as an EO-5C pilot. The PI, in the right seat, had 4,400 hours of total flight time, of which 1,390 was in a fixed-wing aircraft. The PI was also on his first assignment as a EO-5C pilot and had 132 hours in the EO-5C.

### **Commentary**

The accident board determined the IP, who was flying the aircraft, failed to ensure the landing gear was down prior to completing the landing by checking the landing gear handle or landing gear advisory lights in the cockpit. Additionally, the board determined that the PI failed to properly respond to a simulated emergency procedure. While reading aloud the emergency procedure steps associated with a two engine inoperative emergency from the -10CL, the PI failed to take appropriate action at step 11, LANDING GEAR-DWN.

Additionally, the board determined the crew failed to coordinate their actions. Their coordination failure was characterized by a failure to announce and communicate the decision to delay extension of the landing gear during execution of the emergency procedure, and failing to communicate positively in reference to extending the landing gear on final approach. The aircraft's Ground Proximity/Terrain Awareness Warning System was operational and provided audible warnings at the time of the mishap.

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# Mishap Review: CH-47F Environmental Training

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While conducting Combat Crew Training (CCT) at night, in low illumination conditions, the CH-47F attempted to land during dust conditions and contacted a sand dune with the forward rotor blades. The aircraft came to rest on its right side with significant damage and serious injuries to two crewmembers.



## History of flight

The accident aircraft was scheduled to conduct day and NVG CCT training for two pilots and six non-rated crewmembers as part of the unit's relief-in-place (RIP) operations. The crew completed aircraft preparation, crew briefs and run-ups and departed late afternoon to complete the day iterations of dust landings. Weather was VMC with clear skies and unrestricted visibility. The moon had set at 1430 local resulting in zero illumination and low contrast conditions.

After completing day training approaches using the Digital Automated Flight Control System (DAFCS) as the primary method for landing, the aircraft returned to home station for refuel and prepared for the NVG flight. Following refuel, the accident crew returned to the training area and completed three NVG dust landings. During the fourth dust landing, the aircraft impacted the terrain and rolled onto its right side. The aircraft was extensively damaged and two crewmembers received serious injuries.

## Crewmember experience

The IP, sitting in the right seat, had more than 1050 hours total flight time, 530 NVG and 8 hours as an IP. This was his first flight in the aircraft acting as an instructor pilot. The PI had 199 hours total time with 24 under NVG. The unit SP, receiving his RIP training, occupied the center jump seat. Both FE/FI's had approximately 2500 hours total flight time and more than 1000 NVG hours. The CE occupying the right cabin position had 144 total hours with 87 NVG. The left door gunner position had a total of 83 hours with 25 NVG. Additionally, there were two CEs on the ramp and one OR in the left rear cabin area.

## Commentary

The accident board determined that the PI allowed the aircraft to descend below his planned altitude with a high rate of descent/rate of closure and the IP failed to take timely and appropriate actions to stop unsafe conditions. Additionally, the aircraft landed

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approximately one-half mile short of its previous landing area. The site was dominated by sand dunes ranging 10 to 30 meters in height. The aircraft struck a sand dune with the forward rotor blades during landing.

Also noted were errors in crew coordination in that the pilots failed to announce their actions to the remaining crewmembers when they initiated the approach to the LZ. It was also determined one crewmember was unrestrained during the accident sequence.

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Manned Aircraft Class A – C Mishap Table										
	Month	FY 11					FY 12			
		Class A Mishaps	Class B Mishaps	Class C Mishaps	Army Fatalities		Class A Mishaps	Class B Mishaps	Class C Mishaps	Army Fatalities
1 <sup>st</sup> Qtr	October	0	1	3			2	1	6	1
	November	0	2	14			1	1	5	0
	December	2	1	4	4		2	2	8	4
2 <sup>nd</sup> Qtr	January	0	0	8			2	0	9	0
	February	0	2	2			2	1	5	0
	March	2	1	5			0	0	2	0
3 <sup>rd</sup> Qtr	April	2	1	11						
	May	2	2	2	1					
	June	3	1	3	2					
4 <sup>th</sup> Qtr	July	2	2	9	2					
	August	2	2	9	2					
	September	0	1	5	0					
Total for Year		15	16	75	11	Year to Date	9	5	35	5

As of 6 Mar 12

# Blast From The Past Article #2

Articles from the archives of past Flightfax issues

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## **Accountability** Reprinted from March 1999 Flightfax

Much too often, safety is defined as the absence of accidents. Such a definition can easily lead to an attitude similar to that of a lawbreaker who measures his success by the number of times he gets away with it. As leaders, we must recognize that even a seemingly small infraction can become a key factor in a set of circumstances that leads to an accident. Therefore, we must create a climate of accountability in our units by taking positive action to deal with every breakdown in professional discipline and standards.

Safe aviation operations require elimination of undisciplined actions before they cause an accident. But many times, in the name of “protecting” an aviator’s career, we hesitate to hold aviators accountable for breaches of flight discipline, disregard of procedures, and failures to perform to standard. We sometimes treat such violations as isolated incidents that don’t warrant disciplinary action. However, doing this can allow a climate of tolerance to develop, a command climate in which breaking the rules is overlooked.

This must stop. We must create a command climate of accountability in which violations of regulations and procedures are not tolerated. And we must do it before an accident happens.

There is no better predictor of future performance than past performance. The insurance industry knows this to be true. Their studies have shown, for example, that a person convicted of a first offense of drunk driving has gotten away with it many times before being caught. This is why insurance rates go up immediately upon the first conviction: the insurance companies know it wasn’t the first time the driver drove drunk; it was simply the first time he or she was caught.

There’s a lesson here for commanders. Few of us will ever deal with a true first-time violator; what most of us will see are repeat violators who are caught for the first time. And that’s why we must take action at the first sign of a regulatory or procedural violation. If we do not, we as leaders set a new standard – a lower standard.

This is not to suggest that every infraction should result in the violator being removed from the cockpit; rather, every infraction should be dealt with appropriately. We have powerful tools – harsh and not so harsh – we can use to show that we will not tolerate even the slightest infraction. And we do this without ruining the careers of aviators who deserve a second chance.

All it takes is consistent enforcement of standards. We have the tools – actions ranging from counseling to removal from flight status – to make the “punishment” fit the “crime.” There is no excuse for a commander ever to overlook an infraction, even a minor one, because overlooking violations creates a tolerant command climate that will eventually result in an accident. Let me give you an example.

Several years ago, an Army aviator flew his helicopter into a lake while flying at 90 to 100 knots within 5 feet of the water. In the 12 months before the accident in which he died, this

# Blast From The Past continued from previous page

aviator had had four operational hazard reports (OHRs) filed against him, in addition to at least two verbal reports about his flying. Although the unit commander knew about the OHRs, written and verbal, and rumors about the aviator's "cowboy" style of flying and reputation as a "hot dog," the commander apparently looked at each report as a separate incident and never considered them as an indication of a pattern. As a result, this aviator got a "second chance" one time too many, and cost him his life.

Many years ago, the Army Safety Center surveyed three aviation organizations that consistently maintained excellent safety records to determine the characteristics that led to their exceptional safety records. Each of them – a combat aviation battalion, an air cavalry squadron, and an aviation battalion – had different organizational structure. And mission-wise, they had little in common except their success. But their commanders had one important characteristic in common: Each of them consistently took immediate and effective action against deviations from established standards.

Undisciplined behavior rarely corrects itself. It's the commander's job to deal appropriately with violations as they occur. And, as commanders, we must take it one step further: We must document infractions so that habitual violators don't revert to "first-time" violators when a new commander comes in or the aviator moves on to a new unit.

Where soldiers' lives are at stake, we cannot afford to forgive and forget. **Leaders save soldiers.**

-BG Charles M. Burke was the Director of Army Safety and Commanding General, U.S. Army Safety Center 1998-1999 (article from Flightfax March 1999).

**One of the tests of leadership is the ability to recognize a problem before it becomes an emergency. –Arnold Glasow**

UAS Class A – C Mishap Table									
	FY 11 UAS Mishaps					FY 12 UAS Mishaps			
	Class A Mishaps	Class B Mishaps	Class C Mishaps	Total		Class A Mishaps	Class B Mishaps	Class C Mishaps	Total
MQ-1	2		1	3	W/GE				
MQ-5	3		1	4	Hunter	1	1	1	3
RQ-7	1	11	30	42	Shadow		6	7	13
RQ-11					Raven				
RQ-16A			3	3	T- Hawk				
MQ-18A									
SUAV			1	1	SUAV			4	4
Aerostat	6	9		15	Aerostat		1		1
Total Year	12	20	36	68	Year to Date	1	8	12	21

As of 6 Mar 12

# Selected Aircraft Mishap Briefs

Information based on Preliminary reports of aircraft mishaps reported in February 2012.

## Utility helicopters

### UH-60

-L series. A hole in the intermediate gearbox cover was found on post flight following dust landing training. (Class C)

-L Series. Aircraft settled into soft terrain on the right side during environmental training, damaging VHF antenna and undercarriage. (Class C)

## Attack helicopters

### AH-64D

-Lead aircraft crashed en route to base following mission completion. Tailboom separated from aircraft upon impact. Both crewmembers sustained survivable injuries. (Class A)

-Crew received a No. 2 Engine OUT indication at a hover, followed by high-side failure including NR overspeed. Aircraft landed without further incident. (Class B)

-Bird strike occurred during ferry mission. Aircraft sustained damage to one main rotor blade, resulting in separation of a one-foot section. (Class C)

## Observation helicopters

### OH-58D

-Crew experienced a partial engine failure during a maintenance test flight and landed. Inspection revealed that the engine compressor had ingested a mirror that was apparently left in the plenum chamber. (Class C)

## Cargo helicopters

### CH-47

-F series. Post-flight inspection revealed ramp damage. Suspect ramp contacted a rock during an NVG landing to an HLZ. (Class C)

## Fixed wing aircraft

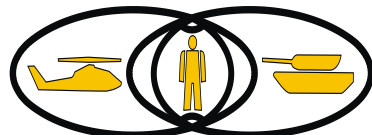
### EO-5C

-Aircraft contacted the runway with the landing gear in the stowed position during a demonstrated emergency procedure, resulting in damage to the undercarriage. (Class A)

### Aerostat

-Aerostat blimp was struck by lightning and crashed outside the FOB. System was destroyed to include payload. (Class B)

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